TOP SECRET

6 November 1965

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SASIN ICBM MISSILE
USSR

1. WEAPON CATEGORY:

INTERCONTINENTAL BALLISTIC MISSILE. U.S. DESIGNATION--SS-8 (SASIN); SOVIET DESIGNATION UNKNOWN. (PHOTO TAKEN 9 MAY 65, MOSCOW VE DAY PARADE; MISSILE WAS FIRST SEEN AND PHOTOGRAPHED DURING 7 NOV 64 MOSCOW PARADE).

2. PRODUCTION:

THE KALININGRAD MISSILE DEVELOPMENT COMPLEX IS A MAJOR CENTER IN THE USSR FOR RESEARCH AND DEVELOPMENT OF SURFACE-TO-SURFACE BALLISTIC MISSILES AND SPACE VEHICLES. WITHIN THE COMPLEX ARE THE CENTRAL DESIGN BUREAU FOR SPACE AND INTERCONTINENTAL ROCKETS WHICH IS RESPONSIBLE FOR ALL MAJOR LIQUID PROPELLANT SSM'S AND SPACE VEHICLES; SCIENTIFIC RESEARCH INSTITUTE NO. 88 WHICH DEVELOPED THE SS-8; AND MISSILE PLANT NO. 88 WHICH MANUFACTURED THE PROTOTYPE MODELS OF THE SS-8 AND WAS PROBABLY INVOLVED IN THE SERIES PRODUCTION OF THE MISSILE.

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3. RESEARCH & DEVELOPMENT:

THE INITIAL SS-8 TEST FLIGHTS WERE FIRED FROM LAUNCH COMPLEX "A" (PAD A2) AT THE TYURATAM MISSILE TEST CENTER.

4. TROOP TRAINING & OPERATIONAL TESTING:

LAUNCH COMPLEX "F", TYURATAM MTC. THIS HARDENED, THREE-SILO LAUNCH FACILITY IS THE PROTOTYPE FOR THE DEPLOYED SS-8 HARDENED LAUNCH SITES.

5. DEPLOYED SITE:

LAUNCH AREA "A" AT THE OMSK ICBM COMPLEX IS ONE OF THREE HARDENED SS-8 LAUNCH FACILITIES KNOWN TO BE DEPLOYED IN THE USSR.

6. MISSILE DESCRIPTION:

THE SS-8 (SASIN) IS A TANDEM, TWO-STAGE, LIQUID-PROPELLED ICBM.

.....10 FT

....162,000 LBS

....328,000 LBS

.... 68,000 LBS

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.....6,500 NM

AN SS-8 READY FOR FLIGHT MAY BE AS MUCH AS 10 FT LONGER THAN THE PARADE MISSILES BECAUSE IT IS BELIEVED TO USE A SINGLE THRUST CHAMBER WHICH CANNOT BE CONTAINED WITHIN THE MISSILE BUT WOULD HAVE TO PROTRUDE FROM THE REAR. IN ADDITION, THE NOSECONE SHOWN WAS PROBABLY SMALLER THAN THE ACTUAL REENTRY VEHICLE.

7. PROPULSION:

THE SS-8 EMPLOYS CRYOGENIC PROPELLANTS. THE FUEL IS AN AMINE, AND THE OXIDIZER IS LIQUID OXYGEN (LOX). THERE IS A SINGLE BOOSTER ENGINE ON THE FIRST STAGE, AND THE SECOND STAGE HAS A SINGLE SUSTAINER ENGINE AND FOUR VERNIER/CONTROL CHAMBERS.

25X1

25X1

8. GUIDANCE:

BELIEVED TO BE RADIO-INERTIAL. THIS TYPE OF GUIDANCE MAKES THE SS-8 A HIGHLY ACCURATE WEAPON SYSTEM.

25X1

9. BASING:

THE SS-8 HAS TWO TYPES OF LAUNCH FACILITIES. ONE IS THE HARDENED, THREE-SILO FACILITY, AND THE OTHER IS A "SOFT" FACILITY. THE "SOFT" LAUNCH FACILITY CONTAINS TWO FLAT CONCRETE LAUNCH PADS. IN THE HARDENED MODE, IT IS BELIEVED THAT THE SS-8 IS FIRED FROM WITHIN THE SILO RATHER THAN FIRST BEING ELEVATED TO THE SURFACE.

25X1

25X1

[redacted]

11. FLIGHT TESTING:

[redacted]

THE FIRST DETECTED FLIGHT TEST OF THE SS-8 TOOK PLACE ON 9 APR 61. THIS TEST, A FAILURE, FOLLOWED BY ABOUT TWO MONTHS THE INITIAL FLIGHT TEST OF THE SS-7 (FEB 61), THE USSR'S MOST WIDELY DEPLOYED ICBM. INCLUDING THE INITIAL FLIGHT TEST, THE SS-8 HAS BEEN FLOWN A TOTAL OF 58 TIMES AS OF 4 NOV 65. SEVENTEEN OF THESE FIRINGS RESULTED IN FAILURES, AND THE RESULT OF ONE (TO THE 3,400 NM RANGE) IS UNDETERMINED. OF THE TOTAL NUMBER OF FIRINGS, SIX HAVE BEEN TO EXTENDED RANGES AND TWO OF THESE HAVE BEEN FAILURES.

EARLY SS-8 FIRINGS WERE MARKED BY A DEGREE OF UNRELIABILITY UNUSUAL FOR SOVIET

[redacted]

ICBMS AND BY LONG PERIODS OF TIME BETWEEN LAUNCHES (E.G., 159 AND 196 DAYS). OPERATIONAL PROOF-TESTING OF THE SS-8 APPARENTLY ENDED WITH THE FIRING OF TWO SS-8'S WITHIN 30 MINUTES ON 22 JAN 64, ONE TO THE 3,400 NM IMPACT AREA, AND ONE TO THE 6,500 NM IMPACT AREA.

12. **DEPLOYMENT:**

[redacted]

THERE ARE THREE HARDENED AND SEVEN SOFT SS-8 LAUNCH FACILITIES (TOTAL OF 23 LAUNCHERS) WHICH HAVE BEEN IDENTIFIED IN THE USSR. THESE SITES ARE DEPLOYED AT THE KOZELSK, OMSK, PLESETSK, AND TYUMEN ICBM COMPLEXES. 25